ST-V715L

SERVICE MANUAL

AEP Model
UK Model



SPECIFICATIONS

Tuner

Circuit system — FM stereo, FM/AM superheterodyne tuner
Quartz-locked PLL digital synthesizer system

FM tuner

Frequency range — 87.5 – 108 MHz

Antenna terminals — 75 ohms unbalanced

Intermediate frequency — 10.7 MHz

Sensitivity	at 46 dB quieting 19.5 dBf, 5 μV (mono) 39.5 dBf, 50 μV (stereo)
Usable sensitivity	—
Signal-to-noise ratio	74 dB (mono) 69 dB (stereo)
Harmonic distortion at 1 kHz	0.08% (mono) 0.15% (stereo)
Separation at 1 kHz	45 dB
Capture ratio	1.0 dB
AM suppression ratio	54 dB
Automatic tuning threshold	35 dBf

Frequency response	40 Hz to 12.5 kHz ±0.5 dB
Selectivity	60 dB (400 kHz)
Image response ratio	50 dB
If response ratio	90 dB

Output — 410 mV, 3.3 kilohms (at 40 kHz deviation)

MW/LW tuner (ST-V715L)

	MW	LW
Tuning range	531 to 1,602 kHz	153 to 281 kHz
Antenna	AM loop antenna, external antenna terminal	
Intermediate frequency	450 kHz	

When the supplied AM loop antenna is used.

	MW	LW
Usable sensitivity	(999 kHz) 500 μV/m	(230 kHz) 900 μV/m
Signal-to-noise ratio	(999 kHz) 54 dB	(230 kHz) 50 dB
Harmonic distortion (400 Hz)	0.3%	0.3%
Selectivity (9 kHz)	32 dB	32 dB

General

Power requirements
UK model: 240 V AC, 50/60 Hz
AEP model : 220V AC, 50/60Hz

Power consumption — 15 W

AC outlet — 1 Unswitched, max. 100 W

Dimensions — Approx. 355 × 80 × 315 mm (W/H/D)
(14 × 3¼ × 12½ inches)

Weight — Approx. 2.5 kg (5 lb 9 oz)

Accessories supplied
Remote control cord (1)
Connecting cord (1)
AM loop antenna (1)
FM wire antenna

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

MICROFILM

FM STEREO/FM-AM TUNER

SONY®

- **IF OFFSET ADJUSTMENT (FM IF)**

Diode Installations Depending on the Ceramic Filters (CF101, 102)

This set employs three ceramic filters (CF101, 102) which should have the same color marking to identify their center frequency Therefore FM IF offset adjustment by diodes (D364, 365) installation is necessary to match the center frequency of the ceramic filters used with FM intermediate frequency.



Ceramic filter		Diode installation		FM intermediate frequency (MHz)
Color mark	Center frequency (MHz)	D364	D365	
White	10.750	○	×	10.750
Red	10.700	×	×	10.700
Black	10.650	×	○	10.650

○ : installed
× : not installed

FM intermediate frequency is determined by the three types as shown above. Ceramic filters of same center frequency, i.e., of same color coding should be used for CF101 through CF102.

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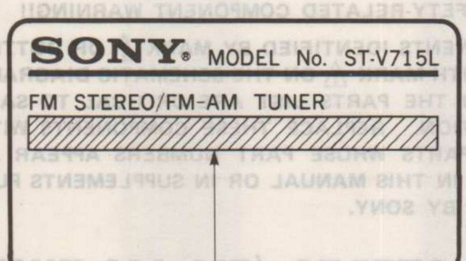
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SECTION 1 GENERAL

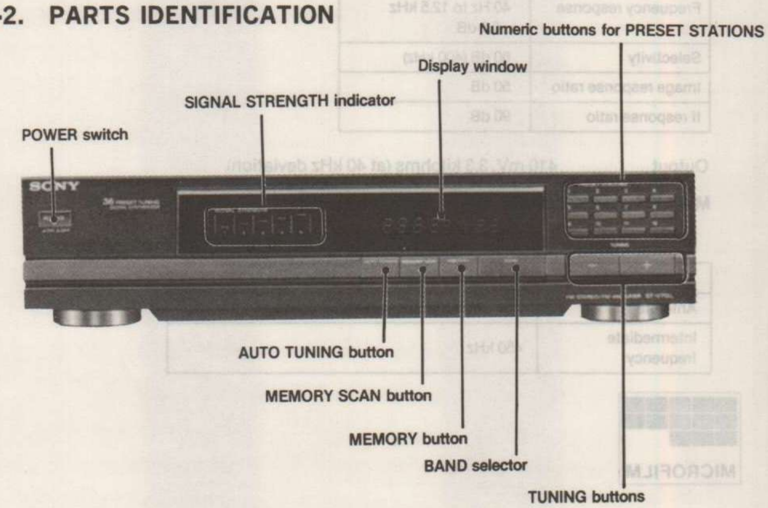
1-1. MODEL IDENTIFICATION

—Specification Label—



AEP model: AC 220V~50/60Hz 15W
UK model: AC 240V~50/60Hz 15W

1-2. PARTS IDENTIFICATION

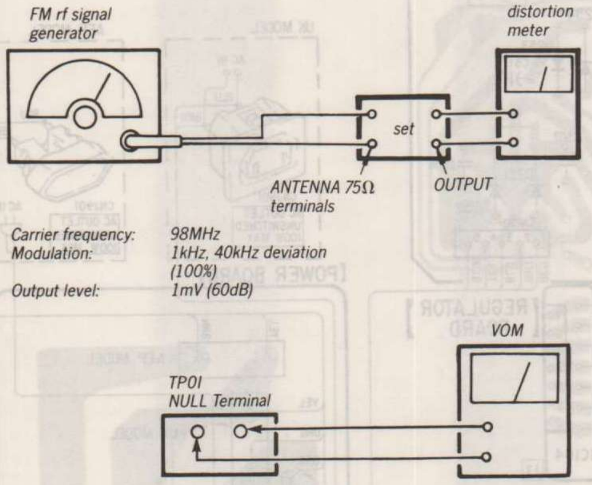


SECTION 2
ELECTRICAL ADJUSTMENTS

FM SECTION

FM DISCRIMINATOR ADJUSTMENT

Setting:

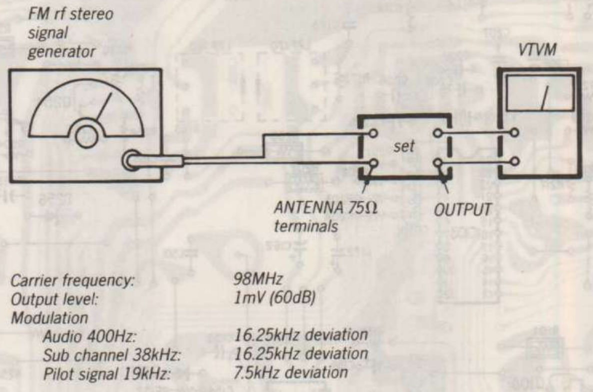


Procedure:

1. Tune the set to 98MHz.
2. Adjust the T121 for 0V reading on VOM.
3. Adjust the T122 for minimum reading on distortion meter.

FM STEREO SEPARATION ADJUSTMENT

Procedure:

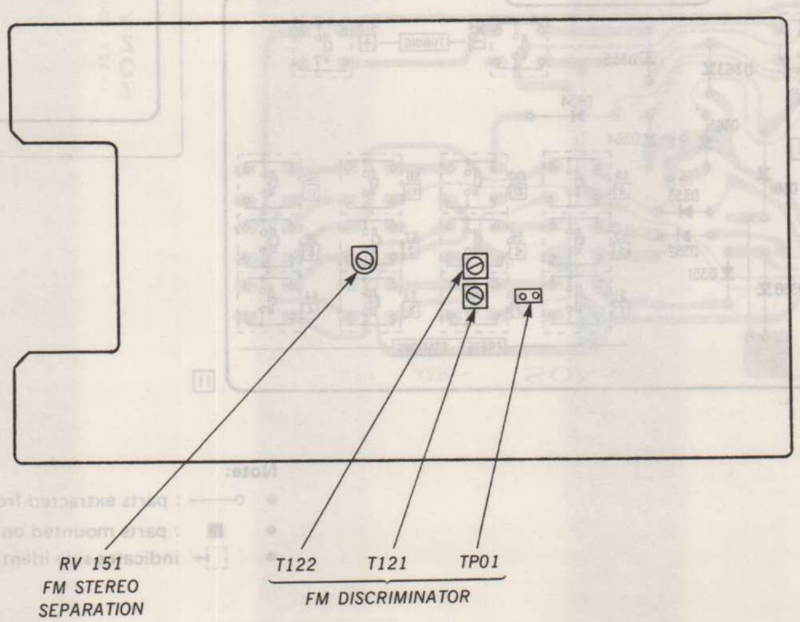


FM stereo signal generator output channel	VTVM connection	VTVM reading (dB)
L-CH	L-CH	Ⓐ
R-CH	L-CH	Ⓑ Adjust RV151 for minimum reading.
R-CH	R-CH	Ⓒ
L-CH	R-CH	Ⓓ Adjust RV151 for minimum reading.

L-CH Stereo separation: Ⓐ – Ⓑ
R-CH Stereo separation: Ⓒ – Ⓓ

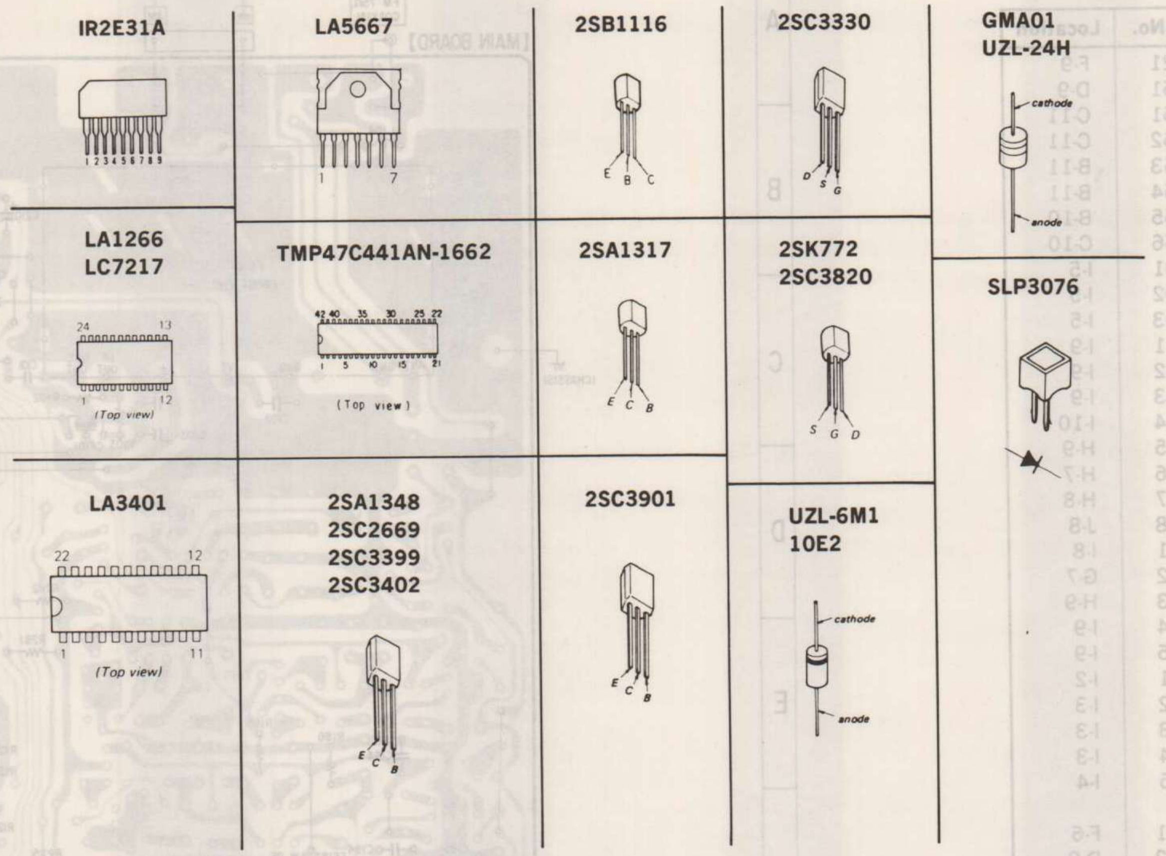
The separations of both channels should be equal.

Adjustment Location :



SECTION 3
DIAGRAMS

3-1. SEMICONDUCTOR LEAD LAYOUTS

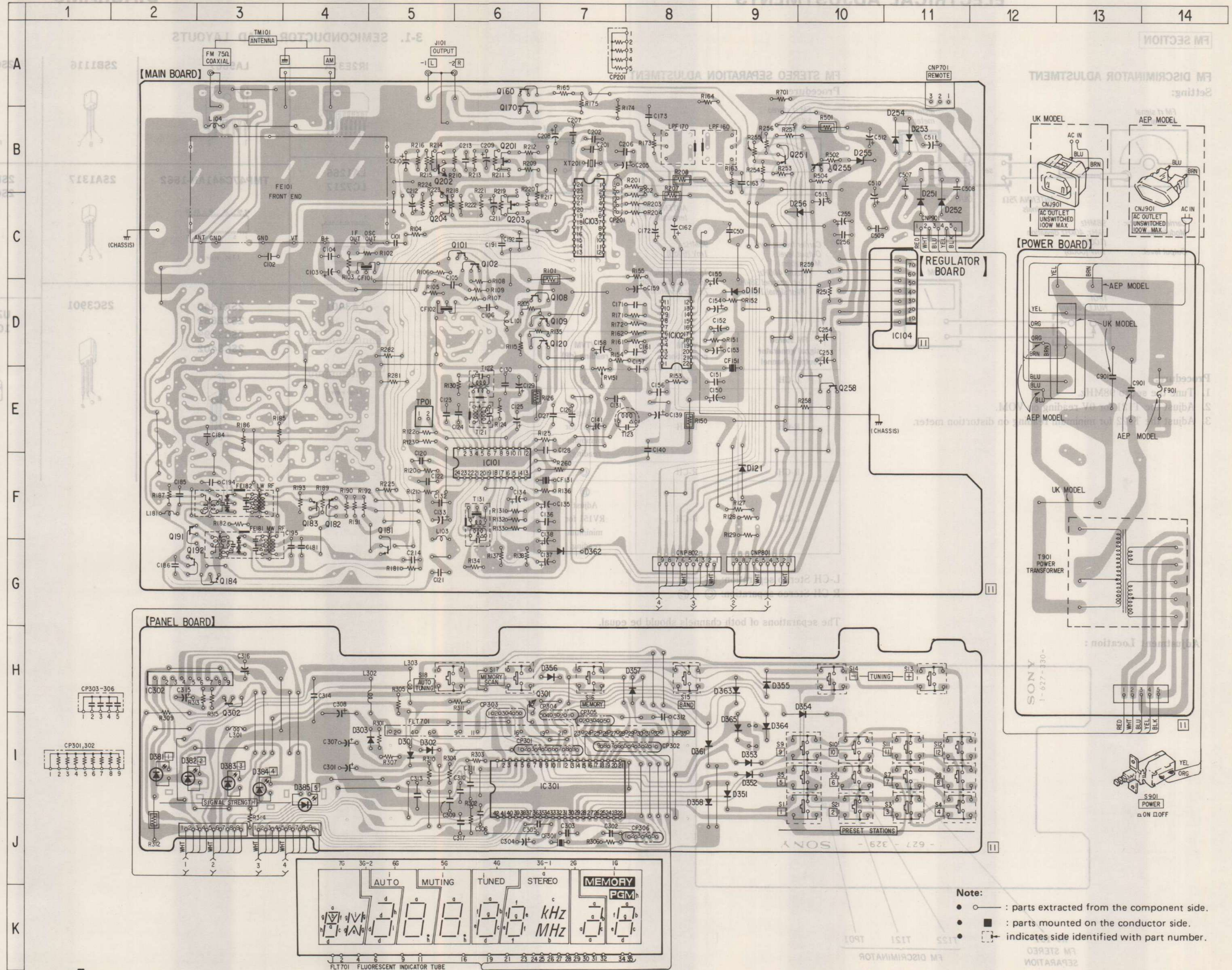


3-2. PRINTED WIRING BOARDS

• Refer to page 4 for Semiconductor Lead Layouts.

• **Semiconductor Location**

Ref. No.	Location
D121	F-9
D151	D-9
D251	C-11
D252	C-11
D253	B-11
D254	B-11
D255	B-10
D256	C-10
D301	I-5
D302	I-5
D303	I-5
D351	I-9
D352	I-9
D353	I-9
D354	I-10
D355	H-9
D356	H-7
D357	H-8
D358	J-8
D361	I-8
D362	G-7
D363	H-9
D364	I-9
D365	I-9
D381	I-2
D382	I-3
D383	I-3
D384	I-3
D385	I-4
IC101	F-6
IC102	D-8
IC103	C-7
IC104	D-11
IC301	I-7
IC302	H-2
Q101	C-6
Q102	C-6
Q108	D-7
Q109	D-7
Q120	D-7
Q160	A-6
Q170	B-6
Q181	G-5
Q182	F-4
Q183	F-4
Q184	G-3
Q191	F-2
Q192	G-2
Q201	B-6
Q202	B-5
Q203	C-6
Q204	C-5
Q251	B-9
Q255	B-10
Q258	E-10
Q301	H-6
Q302	H-3


Note:
- ○—— : parts extracted from the component side.
- ■ : parts mounted on the conductor side.
- ⬚ indicates side identified with part number.

ST-V715L ST-V715L

3-3. SCHEMATIC DIAGRAM

• Refer to page 11 for TUNER SCHEMATIC DIAGRAMS.



Note:

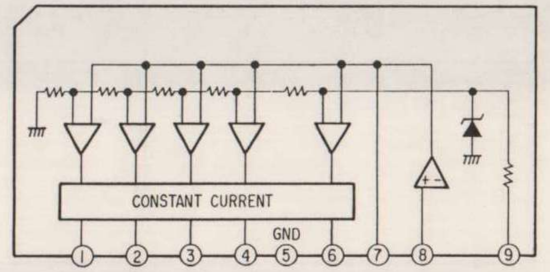
- All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and $^1/_4$W or less unless otherwise specified.
- △ : internal component.
- [resistor symbol] : nonflammable resistor.
- [box] : adjustment for repair.
- Voltage and waveforms are dc with respect to ground under no-signal (detuned) conditions.
  no mark : FM < >: LW
  ( ): MW
- Voltages are taken with a VOM (50 kΩ/V).
  Voltage variations may be noted due to normal production tolerances.
- Signal path.
  ⇨ : FM
- Switch

Ref. No.	Switch	Position
S1	1	OFF
S2	2	OFF
S3	3	OFF
S4	4	OFF
S5	5	OFF
S6	6	OFF
S7	7	OFF
S8	8	OFF
S9	9	OFF
S10	10	OFF
S11	11	OFF
S12	12	OFF
S13	TUNING+	OFF
S14	TUNING−	OFF
S15	BAND	OFF
S16	MEMORY	OFF
S17	MEMORY SCAN	OFF
S18	AUTO TUNING	OFF
S901	POWER	OFF

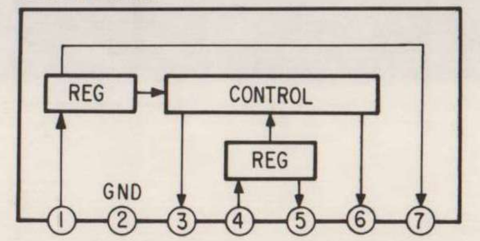
Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

• IC BLOCK DIAGRAM

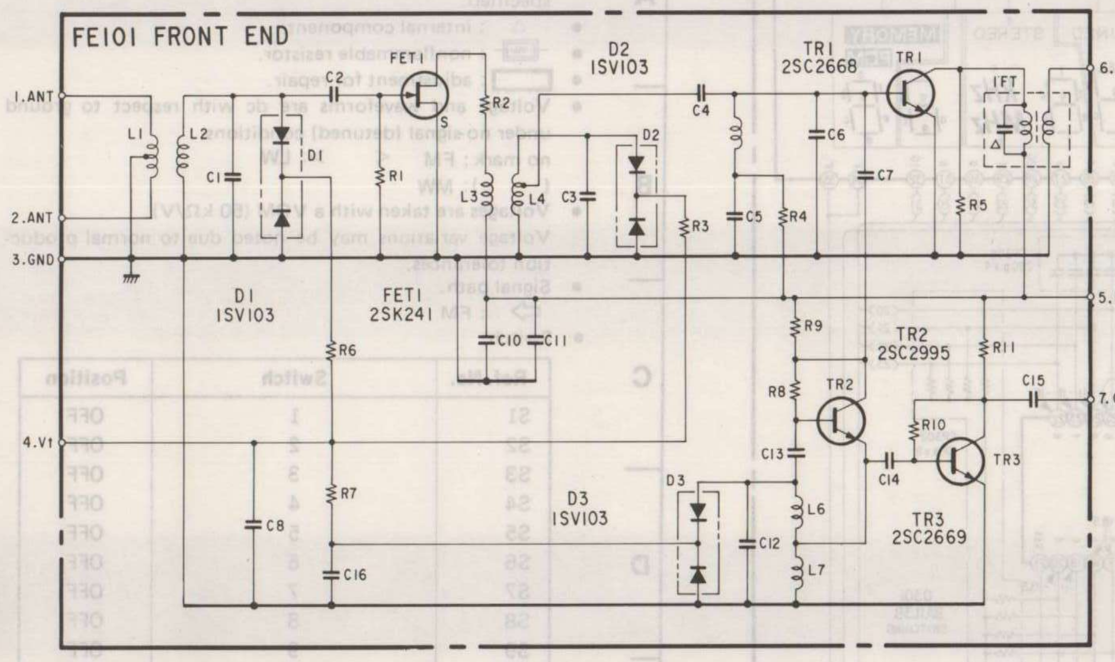
IC302 IR2E31A



IC401 LA5667



3-4. TUNER SCHEMATIC DIAGRAMS



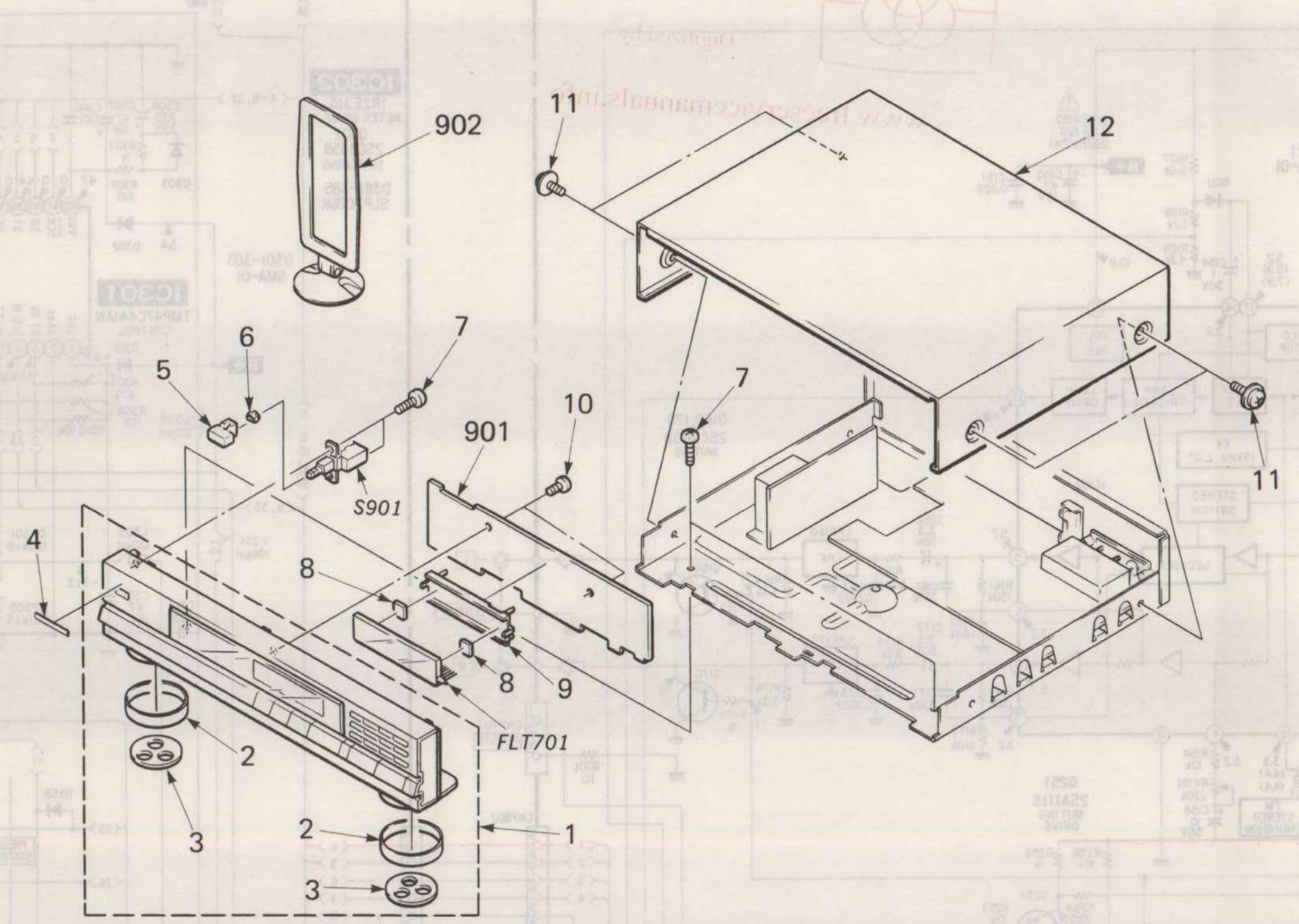
SECTION 4 EXPLODED VIEWS

NOTE:

- The mechanical parts with no reference number in the exploded views are not supplied.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked "★" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Due to standardization, parts with part number suffix -XX and -X may be different from the parts specified in the components used on the set.
- Color Indication of Appearance Parts Example:
  (RED) . . . KNOB, BALANCE (WHITE)
  ↑ Cabinet's Color ↑ Parts Color

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

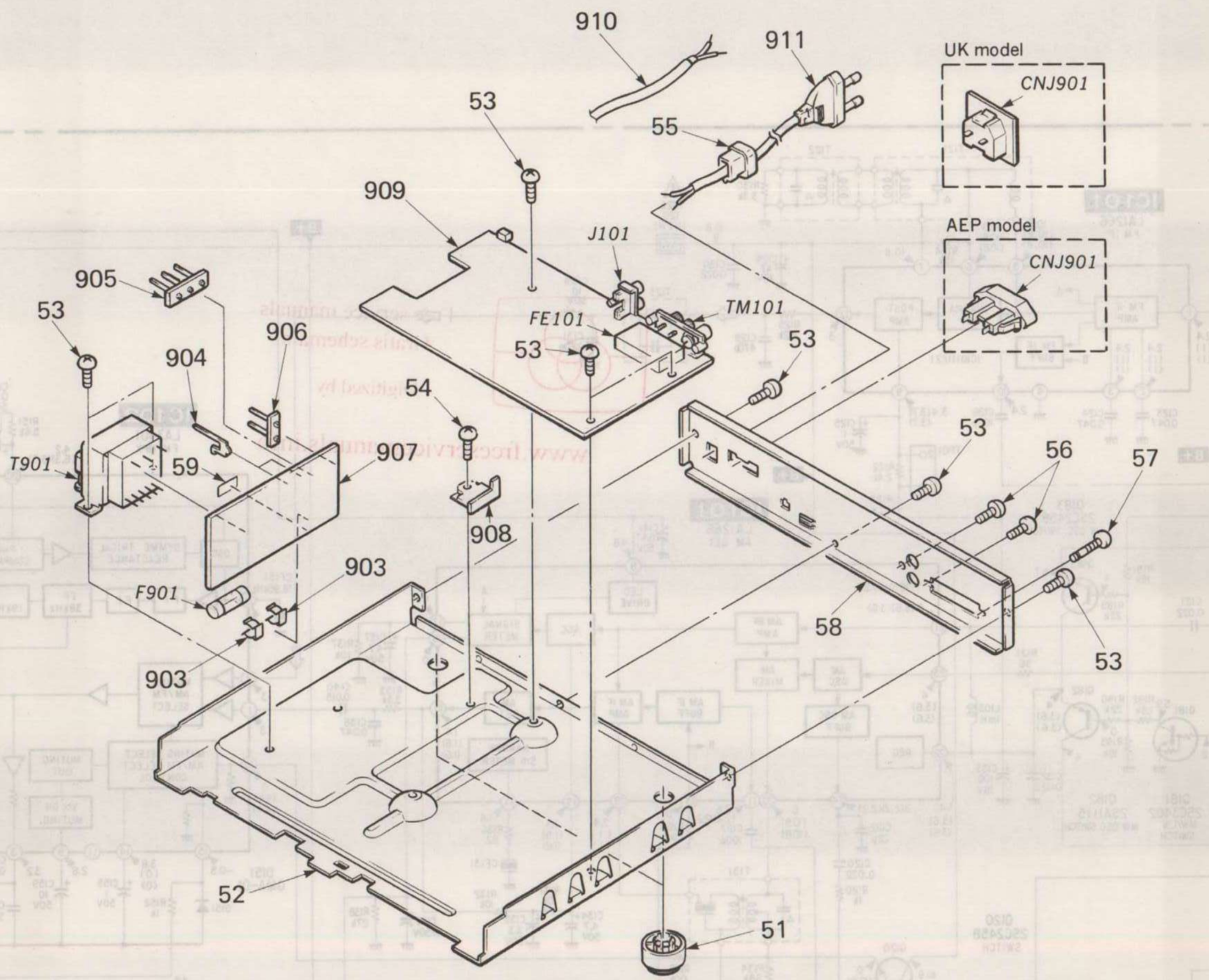
4-1. FRONT PANEL SECTION



Ref.No	Part No.	Description	Remarks
1	X-4917-248-1	PANEL ASSY, FRONT	
2	4-921-918-11	PLATE, ORNAMENTAL	
3	4-921-906-01	FELT	
4	3-701-690-00	(UK)....LABEL (MADE IN JAPAN)	
5	4-921-919-01	BUTTON (P)	
6	★4-864-307-00	RING	
7	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S	
8	4-921-941-11	CUSHION (FL)	

Ref.No	Part No.	Description	Remarks
9	4-923-103-01	HOLDER, FL TUBE	
10	7-685-134-19	SCREW +BTP 2.6X8 TYPE2 N-S	
11	4-886-821-01	SCREW, M3 CASE	
12	4-919-389-11	CASE	
901	★A-4410-813-A	MOUNTED PCB, CONTROL	
902	1-501-349-11	ANTENNA, LOOP	
FLT701	1-519-453-11	INDICATOR TUBE, FLUORESCENT	
S901	⚠.1-553-318-31	SWITCH, PUSH (AC POWER)(1 KEY)	

4-2. CHASSIS SECTION



Ref.No	Part No.	Description	Remarks
51	X-4921-901-1	FOOT ASSY	
52	★4-924-520-01	CHASSIS	
53	7-682-147-01	SCREW +BVTT 3X6 (S)	
54	7-682-548-04	SCREW +BVTT 3X8 (S)	
55	★3-703-244-00	BUSHING (2104), CORD	
56	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S	
57	3-703-473-00	SCREW, TERMINAL	
58	★4-925-113-21	(UK)....PANEL, BACK	
58	★4-925-113-51	(AEP)....PANEL, BACK	
59	3-701-948-17	(AEP)....LABEL, FUSE	
903	1-533-183-11	(AEP)....HOLDER, FUSE	
904	1-535-416-00	TERMINAL	
905	★1-535-140-00	(UK)....BASE POST 22MM (10MM PITCH) 3P	

Ref.No	Part No.	Description	Remarks
906	1-535-139-00	(AEP)....BASE POST 22MM (10MM PITCH) 2P	
907	1-627-330-11	PC BOARD, POWER	
908	1-626-715-11	PC BOARD, REGULATOR	
909	★A-4339-116-A	MOUNTED PCB, TUNER	
910	⚠.1-556-562-00	(UK)....CORD, POWER	
911	⚠.1-555-750-00	(AEP)....CORD, POWER	
CNJ901	⚠1-526-751-00	(UK)....OUTLET,AC	
CNJ901	⚠1-526-794-11	(AEP)....OUTLET, AC	
F901	⚠.1-532-203-00	(AEP)....FUSE, TIME-LAG	
FE101	1-463-963-11	FRONT END (FM 3 GANG)	
J101	1-565-352-21	JACK, PIN 2P (OUTPUT)	
T901	⚠.1-449-366-11	TRANSFORMER, POWER	
TM101	★1-537-138-21	TERMINAL BOARD (ANTENNA)	

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

SECTION 5 ELECTRICAL PARTS LIST

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- Items marked "★" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- If there are two or more same circuits in a set such as a stereophonic machine, only typical circuit parts may be indicated and capacitors and resistors in other same circuits may be omitted.

CAPACITORS:
MF: μF, PF: $\mu\mu$F.

RESISTORS
- All resistors are in ohms.
- F: nonflammable

COILS
- MMH: mH, UH: μH

SEMICONDUCTORS
In each case, U: μ, for example:
UA...: μA..., UPA...: μPA...,
UPC...: μPC, UPD...: μPD...

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Ref.No	Part No.	Description			
901	★A-4410-813-A	MOUNTED PCB, CONTROL			
902	1-501-349-11	ANTENNA, LOOP			
903	1-533-183-11	(AEP)....HOLDER, FUSE			
904	1-535-416-00	TERMINAL			
905	★1-535-140-00	(UK)....BASE POST 22MM (10MM PITCH) 3P			
906	★1-535-139-00	(AEP)....BASE POST 22MM (10MM PITCH) 2P			
907	★1-627-330-11	PC BOARD, POWER			
908	1-626-715-11	PC BOARD, REGULATOR			
909	★A-4339-116-A	MOUNTED PCB, TUNER			
910	⚠.1-556-562-00	(UK)....CORD, POWER			
911	⚠.1-555-750-00	(AEP)....CORD, POWER			
		CAPACITOR			
C101	1-162-294-31	CERAMIC	0.001MF	10%	50V
C102	1-162-294-31	CERAMIC	0.001MF	10%	50V
C103	1-123-875-11	ELECT	10MF	20%	50V
C104	1-101-005-00	CERAMIC	0.022MF		50V
C105	1-101-005-00	CERAMIC	0.022MF		50V
C106	1-101-005-00	CERAMIC	0.022MF		50V
C120	1-101-005-00	CERAMIC	0.022MF		50V
C121	1-101-005-00	CERAMIC	0.022MF		50V
C122	1-162-207-31	CERAMIC	22PF	5%	50V
C123	1-101-006-41	CERAMIC	0.047MF		50V
C124	1-101-006-41	CERAMIC	0.047MF		50V
C125	1-124-499-11	ELECT	1MF	20%	50V
C126	1-162-282-31	CERAMIC	100PF	10%	50V
C127	1-162-282-31	CERAMIC	100PF	10%	50V
C128	1-162-290-31	CERAMIC	470PF	10%	50V
C129	1-124-477-11	ELECT	47MF	20%	16V
C130	1-101-005-00	CERAMIC	0.022MF		50V
C131	1-102-978-00	CERAMIC	220PF	10%	50V
C132	1-101-005-00	CERAMIC	0.022MF		50V
C133	1-126-101-11	ELECT	100MF	20%	16V
C134	1-124-927-11	ELECT	4.7MF	20%	50V
C135	1-123-382-00	ELECT	3.3MF	20%	50V
C136	1-101-006-41	CERAMIC	0.047MF		50V
C137	1-124-927-11	ELECT	4.7MF	20%	50V
C138	1-124-499-11	ELECT	1MF	20%	50V
C139	1-123-875-11	ELECT	10MF	20%	50V
C140	1-130-485-00	MYLAR	0.015MF	5%	50V
C141	1-124-902-00	ELECT	0.47MF	20%	50V
C150	1-124-477-11	ELECT	47MF	20%	16V
C151	1-101-005-00	CERAMIC	0.022MF		50V
C152	1-123-382-00	ELECT	3.3MF	20%	50V
C153	1-124-464-11	ELECT	0.22MF	20%	50V
C154	1-124-499-11	ELECT	1MF	20%	50V
C155	1-124-499-11	ELECT	1MF	20%	50V
C156	1-108-812-11	MYLAR	0.047MF	5%	50V
C157	1-102-112-00	CERAMIC	330PF	10%	50V
C158	1-123-875-11	ELECT	10MF	20%	50V
C159	1-123-875-11	ELECT	10MF	20%	50V
C161	1-162-288-31	CERAMIC	330PF	10%	50V

Ref.No	Part No.	Description			
C162	1-123-382-00	ELECT	3.3MF	20%	50V
C163	1-161-375-00	CERAMIC	0.0022MF	30%	16V
C171	1-162-288-31	CERAMIC	330PF	10%	50V
C172	1-123-382-00	ELECT	3.3MF	20%	50V
C173	1-161-375-00	CERAMIC	0.0022MF	30%	16V
C181	1-101-005-00	CERAMIC	0.022MF		50V
C184	1-101-005-00	CERAMIC	0.022MF		50V
C185	1-102-119-00	CERAMIC	0.0015MF	10%	50V
C186	1-102-120-00	CERAMIC	0.0018MF	10%	50V
C191	1-101-005-00	CERAMIC	0.022MF		50V
C192	1-101-005-00	CERAMIC	0.022MF		50V
C194	1-102-949-00	CERAMIC	12PF	5%	50V
C195	1-102-934-00	CERAMIC	1PF	0.25PF	50V
C201	1-102-961-00	CERAMIC	27PF	5%	50V
C202	1-101-880-00	CERAMIC	47PF	5%	50V
C205	1-123-875-11	ELECT	10MF	20%	50V
C206	1-101-005-00	CERAMIC	0.022MF		50V
C207	1-101-005-00	CERAMIC	0.022MF		50V
C208	1-123-875-11	ELECT	10MF	20%	50V
C209	1-124-902-00	ELECT	0.47MF	20%	50V
C210	1-124-463-00	ELECT	0.1MF	20%	50V
C211	1-124-925-11	ELECT	2.2MF	20%	50V
C212	1-124-463-00	ELECT	0.1MF	20%	50V
C213	1-101-005-00	CERAMIC	0.022MF		50V
C214	1-101-004-00	CERAMIC	0.01MF		50V
C253	1-124-902-00	ELECT	0.47MF	20%	50V
C254	1-123-875-11	ELECT	10MF	20%	50V
C255	1-123-875-11	ELECT	10MF	20%	50V
C256	1-101-005-00	CERAMIC	0.022MF		50V
C301	1-124-589-11	ELECT	47MF	20%	16V
C302	1-102-963-00	CERAMIC	33PF	5%	50V
C303	1-102-963-00	CERAMIC	33PF	5%	50V
C304	1-124-465-00	ELECT	0.47MF	20%	50V
C305	1-161-379-00	CERAMIC	0.01MF	30%	16V
C306	1-161-379-00	CERAMIC	0.01MF	30%	16V
C307	1-124-589-11	ELECT	47MF	20%	16V
C308	1-125-486-11	TANTALUM	220MF		5.5V
C309	1-161-379-00	CERAMIC	0.01MF	30%	16V
C310	1-161-379-00	CERAMIC	0.01MF	30%	16V
C311	1-161-379-00	CERAMIC	0.01MF	30%	16V
C312	1-101-004-00	CERAMIC	0.01MF		50V
C313	1-162-294-31	CERAMIC	0.001MF	10%	50V
C314	1-161-494-00	CERAMIC	0.022MF		25V
C315	1-124-589-11	ELECT	47MF	20%	16V
C316	1-126-163-11	ELECT	4.7MF	20%	50V
C317	1-161-379-00	CERAMIC	0.01MF	30%	16V
C501	1-101-006-00	CERAMIC	0.047MF		50V
C507	1-106-367-00	MYLAR	0.01MF	10%	100V
C508	1-106-367-00	MYLAR	0.01MF	10%	100V
C509	1-101-004-00	CERAMIC	0.01MF		50V
C510	1-126-105-11	ELECT	1000MF	20%	35V
C511	1-124-918-11	ELECT	47MF	20%	63V

Ref.No	Part No.	Description			
C513	1-124-910-11	ELECT	47MF	20%	35V
C901 ⚠	1-161-744-00	CERAMIC	0.01MF		400V
CF101	1-567-389-11	FILTER, CERAMIC			
CF102	1-567-389-11	FILTER, CERAMIC			
CF131	1-527-981-00	FILTER, CERAMIC			
CF151	1-567-250-11	OSCILLATOR, CERAMIC 18.95KHz			
CF301	1-577-029-11	VIBRATOR, CERAMIC 4.2MHz			
CNJ901 ⚠	1-526-751-00	(UK)....OUTLET, AC			
CNJ901 ⚠	1-526-794-11	(AEP)....OUTLET, AC			
CNP701	1-564-358-00	PIN, CONNECTOR 3P (REMOTE)			
CNP801	*1-506-503-11	PIN, CONNECTOR 9P			
CNP802	*1-506-503-61	PIN, CONNECTOR 9P			
CNP901	*1-564-508-11	PLUG, CONNECTOR 5P			
CP201	1-232-986-11	COMPOSITION CIRCUIT BLOCK 10KX4			
CP301	1-233-138-11	COMPOSITION CIRCUIT BLOCK 100KX8			
CP302	1-233-138-11	COMPOSITION CIRCUIT BLOCK100KX8			
CP303	1-233-148-11	COMPOSITION CIRCUIT BLOCK 220PX4			
CP304	1-233-148-11	COMPOSITION CIRCUIT BLOCK 220PX4			
CP305	1-233-148-11	COMPOSITION CIRCUIT BLOCK 220PX4			
CP306	1-233-148-11	COMPOSITION CIRCUIT BLOCK 220PX4			
D121	1-806-937-11	DIODE GMA-01			
D151	1-806-937-11	DIODE GMA-01			
D251	8-719-200-02	DIODE 10E2			
D252	8-719-200-02	DIODE 10E2			
D253	8-719-200-02	DIODE 10E2			
D254	8-719-200-02	DIODE 10E2			
D255	8-719-002-39	DIODE UZL-24H			
D256	8-719-000-57	DIODE UZL-6M1			
D301	1-806-937-11	DIODE GMA-01			
D302	1-806-937-11	DIODE GMA-01			
D303	1-806-937-11	DIODE GMA-01			
D351	1-806-937-11	DIODE GMA-01			
D352	1-806-937-11	DIODE GMA-01			
D353	1-806-937-11	DIODE GMA-01			
D354	1-806-937-11	DIODE GMA-01			
D355	1-806-937-11	DIODE GMA-01			
D356	1-806-937-11	DIODE GMA-01			
D357	1-806-937-11	DIODE GMA-01			
D358	1-806-937-11	DIODE GMA-01			
D361	1-806-937-11	DIODE GMA-01			
D362	1-806-937-11	DIODE GMA-01			
D363	1-806-937-11	DIODE GMA-01			
D364	1-806-937-11	DIODE GMA-01			
D365	1-806-937-11	DIODE GMA-01			
D381	8-719-969-99	DIODE SLP3076K			
D382	8-719-969-99	DIODE SLP3076K			
D383	8-719-969-99	DIODE SLP3076K			
D384	8-719-969-99	DIODE SLP3076K			
D385	8-719-969-99	DIODE SLP3076K			
F901 ⚠	1-532-203-00	(AEP)....FUSE, TIME-LAG			
FE101	1-463-963-11	FRONT END (FM 3 GANG)			
FE181	1-235-936-11	ENCAPSULATED COMPONENT			
FE182	1-236-028-11	ENCAPSULATED COMPONENT			
FLT701	1-519-453-11	INDICATOR TUBE, FLUORESCENT			
IC101	8-759-804-55	IC LA1266			
IC102	8-759-801-80	IC LA3401			
IC103	8-759-820-10	IC LC7217			
IC104	8-759-820-09	IC LA5667			
IC301	8-759-230-49	IC TMP47C441AN-1662			
IC302	8-759-917-42	IC IR2E31A			

Ref.No	Part No.	Description	
J101	1-565-352-21	JACK, PIN 2P (OUTPUT)	
L101	1-410-563-11	INDUCTOR	82UH
L103	1-410-576-11	INDUCTOR	1MMH
L104	1-410-532-11	INDUCTOR	0.22UH
L181	1-410-568-21	INDUCTOR	220UH
L301	1-410-564-41	INDUCTOR	100UH
L302	1-410-334-11	INDUCTOR	100UH
L303	1-410-334-11	INDUCTOR	100UH
LPF160	1-235-164-00	FILTER, LOW PASS	
LPF170	1-235-164-00	FILTER, LOW PASS	
Q101	8-729-266-93	TRANSISTOR 2SC2669	
Q102	8-729-266-93	TRANSISTOR 2SC2669	
Q108	8-729-159-01	TRANSISTOR 2SA1348	
Q109	8-729-806-28	TRANSISTOR 2SC3402	
Q120	8-729-820-23	TRANSISTOR 2SC3330	
Q160	8-729-820-23	TRANSISTOR 2SC3330	
Q170	8-729-820-23	TRANSISTOR 2SC3330	
Q181	8-729-806-28	TRANSISTOR 2SC3402	
Q182	8-729-820-10	TRANSISTOR 2SA1317-SU	
Q183	8-729-820-23	TRANSISTOR 2SC3330	
Q184	8-729-806-38	TRANSISTOR 2SC3399	
Q191	8-729-806-28	TRANSISTOR 2SC3402	
Q192	8-729-806-38	TRANSISTOR 2SC3399	
Q201	8-729-820-12	TRANSISTOR 2SK772	
Q202	8-729-820-13	TRANSISTOR 2SC3820	
Q203	8-729-820-12	TRANSISTOR 2SK772	
Q204	8-729-820-13	TRANSISTOR 2SC3820	
Q251	8-729-820-10	TRANSISTOR 2SA1317-SU	
Q255	8-729-118-01	TRANSISTOR 2SB1116	
Q258	8-729-806-28	TRANSISTOR 2SC3402	
Q301	8-729-806-26	TRANSISTOR 2SC3901	
Q302	8-729-820-23	TRANSISTOR 2SC3330	

RESISTOR

Ref.No	Part No.	Description				
R101 ⚠	1-247-740-11	CARBON	120	5%	1/2W	F
R102	1-249-411-11	CARBON	330	5%	1/4W	
R103	1-249-411-11	CARBON	330	5%	1/4W	
R104	1-249-413-11	CARBON	470	5%	1/4W	
R105	1-249-432-11	CARBON	18K	5%	1/4W	
R106	1-249-411-11	CARBON	330	5%	1/4W	
R107	1-249-414-11	CARBON	560	5%	1/4W	
R108	1-249-411-11	CARBON	330	5%	1/4W	
R109	1-249-434-11	CARBON	27K	5%	1/4W	
R115	1-249-433-11	CARBON	22K	5%	1/4W	
R120	1-249-417-11	CARBON	1K	5%	1/4W	
R121	1-249-402-11	CARBON	56	5%	1/4W	
R122	1-247-840-00	CARBON	2.4K	5%	1/4W	
R123	1-249-434-11	CARBON	27K	5%	1/4W	
R124	1-249-431-11	CARBON	15K	5%	1/4W	
R125	1-249-421-11	CARBON	2.2K	5%	1/4W	
R126 ⚠	1-247-740-11	CARBON	120	5%	1/2W	F
R127	1-249-426-11	CARBON	5.6K	5%	1/4W	
R128	1-249-418-11	CARBON	1.2K	5%	1/4W	
R129	1-247-846-11	CARBON	4.3K	5%	1/4W	
R130	1-249-423-11	CARBON	3.3K	5%	1/4W	
R131	1-249-429-11	CARBON	10K	5%	1/4W	
R132	1-249-429-11	CARBON	10K	5%	1/4W	
R133	1-249-423-11	CARBON	3.3K	5%	1/4W	
R134	1-249-439-11	CARBON	68K	5%	1/4W	
R135	1-249-429-11	CARBON	10K	5%	1/4W	
R136	1-249-404-00	CARBON	82	5%	1/4W	
R137	1-249-429-11	CARBON	10K	5%	1/4W	
R138	1-249-434-11	CARBON	27K	5%	1/4W	
R150 ⚠	1-247-740-11	CARBON	120	5%	1/2W	F

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

Ref.No	Part No.	Description				
R151	1-249-426-11	CARBON	5.6K	5%	1/4W	
R152	1-249-417-11	CARBON	1K	5%	1/4W	
R153	1-249-421-11	CARBON	2.2K	5%	1/4W	
R154	1-249-429-11	CARBON	10K	5%	1/4W	
R155	1-249-441-11	CARBON	100K	5%	1/4W	
R161	1-247-883-00	CARBON	150K	5%	1/4W	
R162	1-247-885-00	CARBON	180K	5%	1/4W	
R163	1-249-423-11	CARBON	3.3K	5%	1/4W	
R164	1-249-423-11	CARBON	3.3K	5%	1/4W	
R165	1-249-417-11	CARBON	1K	5%	1/4W	
R171	1-247-883-00	CARBON	150K	5%	1/4W	
R172	1-247-885-00	CARBON	180K	5%	1/4W	
R173	1-249-423-11	CARBON	3.3K	5%	1/4W	
R174	1-249-423-11	CARBON	3.3K	5%	1/4W	
R175	1-249-417-11	CARBON	1K	5%	1/4W	
R181	1-249-441-11	CARBON	100K	5%	1/4W	
R182	1-249-437-11	CARBON	47K	5%	1/4W	
R185	1-249-441-11	CARBON	100K	5%	1/4W	
R186	1-249-437-11	CARBON	47K	5%	1/4W	
R187	1-247-903-00	CARBON	1M	5%	1/4W	
R189	1-249-433-11	CARBON	22K	5%	1/4W	
R190	1-249-433-11	CARBON	22K	5%	1/4W	
R191	1-249-432-11	CARBON	18K	5%	1/4W	
R192	1-249-419-11	CARBON	1.5K	5%	1/4W	
R193	1-249-432-11	CARBON	18K	5%	1/4W	
R201	1-249-417-11	CARBON	1K	5%	1/4W	
R202	1-249-417-11	CARBON	1K	5%	1/4W	
R203	1-249-417-11	CARBON	1K	5%	1/4W	
R204	1-249-417-11	CARBON	1K	5%	1/4W	
R205	1-249-429-11	CARBON	10K	5%	1/4W	
R207	⚠1-247-696-11	CARBON	47	5%	1/4W	F
R208	⚠1-247-740-11	CARBON	120	5%	1/2W	F
R209	1-249-424-11	CARBON	3.9K	5%	1/4W	
R210	1-249-410-11	CARBON	270	5%	1/4W	
R211	1-249-418-11	CARBON	1.2K	5%	1/4W	
R212	1-249-414-11	CARBON	560	5%	1/4W	
R213	1-249-433-11	CARBON	22K	5%	1/4W	
R214	1-249-421-11	CARBON	2.2K	5%	1/4W	
R215	1-249-425-11	CARBON	4.7K	5%	1/4W	
R216	1-249-405-11	CARBON	100	5%	1/4W	
R217	1-249-423-11	CARBON	3.3K	5%	1/4W	
R218	1-249-410-11	CARBON	270	5%	1/4W	
R219	1-249-418-11	CARBON	1.2K	5%	1/4W	
R220	1-249-414-11	CARBON	560	5%	1/4W	
R221	1-249-425-11	CARBON	4.7K	5%	1/4W	
R222	1-249-421-11	CARBON	2.2K	5%	1/4W	
R223	1-249-425-11	CARBON	4.7K	5%	1/4W	
R224	1-249-405-11	CARBON	100	5%	1/4W	
R225	1-249-429-11	CARBON	10K	5%	1/4W	
R251	1-249-434-11	CARBON	27K	5%	1/4W	
R253	1-249-429-11	CARBON	10K	5%	1/4W	
R254	1-249-409-11	CARBON	220	5%	1/4W	
R255	1-249-417-11	CARBON	1K	5%	1/4W	
R256	1-249-429-11	CARBON	10K	5%	1/4W	
R257	1-249-437-11	CARBON	47K	5%	1/4W	
R258	1-249-441-11	CARBON	100K	5%	1/4W	
R259	1-249-417-11	CARBON	1K	5%	1/4W	
R260	1-249-417-11	CARBON	1K	5%	1/4W	
R281	1-249-425-11	CARBON	4.7K	5%	1/4W	
R282	1-249-429-11	CARBON	10K	5%	1/4W	
R301	1-249-417-11	CARBON	1K	5%	1/4W	
R302	1-249-441-11	CARBON	100K	5%	1/4W	
R303	1-249-425-11	CARBON	4.7K	5%	1/4W	
R304	1-249-429-11	CARBON	10K	5%	1/4W	
R305	1-249-429-11	CARBON	10K	5%	1/4W	

Ref.No	Part No.	Description				
R306	1-249-441-11	CARBON	100K	5%	1/4W	
R307	1-249-405-11	CARBON	100	5%	1/4W	
R309	1-249-415-11	CARBON	680	5%	1/4W	
R310	1-249-429-11	CARBON	10K	5%	1/4W	
R311	1-249-441-11	CARBON	100K	5%	1/4W	
R312	⚠1-247-740-11	CARBON	120	5%	1/2W	F
R314	1-249-429-11	CARBON	10K	5%	1/4W	
R315	1-249-435-11	CARBON	33K	5%	1/4W	
R318	1-249-427-11	CARBON	6.8K	5%	1/4W	
R501	⚠1-247-744-11	CARBON	270	5%	1/2W	F
R502	1-249-425-11	CARBON	4.7K	5%	1/4W	
R504	1-249-429-11	CARBON	10K	5%	1/4W	
R701	1-249-393-11	CARBON	10	5%	1/4W	
RV151	1-228-998-00	RES, ADJ, CARBON 220K				
S1	1-554-303-21	SWITCH, KEY BOARD (1)				
S2	1-554-303-21	SWITCH, KEY BOARD (2)				
S3	1-554-303-21	SWITCH, KEY BOARD (3)				
S4	1-554-303-21	SWITCH, KEY BOARD (4)				
S5	1-554-303-21	SWITCH, KEY BOARD (5)				
S6	1-554-303-21	SWITCH, KEY BOARD (6)				
S7	1-554-303-21	SWITCH, KEY BOARD (7)				
S8	1-554-303-21	SWITCH, KEY BOARD (8)				
S9	1-554-303-21	SWITCH, KEY BOARD (9)				
S10	1-554-303-21	SWITCH, KEY BOARD (10)				
S11	1-554-303-21	SWITCH, KEY BOARD (11)				
S12	1-554-303-21	SWITCH, KEY BOARD (12)				
S13	1-554-303-21	SWITCH, KEY BOARD (TUNING +)				
S14	1-554-303-21	SWITCH, KEY BOARD (TUNING −)				
S15	1-554-303-21	SWITCH, KEY BOARD (BAND)				
S16	1-554-303-21	SWITCH, KEY BOARD (MEMORY)				
S17	1-554-303-21	SWITCH, KEY BOARD (MEMORY SCAN)				
S18	1-554-303-21	SWITCH, KEY BOARD (AUTO TUNING)				
S901	⚠1-553-318-31	SWITCH, PUSH (AC POWER) (1 KEY)				
T121	1-404-743-11	COIL, DISCRIMINATOR				
T122	1-404-742-11	COIL, DISCRIMINATOR				
T123	1-235-126-00	ENCAPSULATED COMPONENT				
T131	1-404-713-11	TRANSFORMER, IF				
T901	⚠1-449-366-11	TRANSFORMER, POWER				
TM101	*1-537-138-21	TERMINAL BOARD (ANTENNA)				
TP01	1-560-060-00	PIN, CONNECTOR 2P				
XT201	1-577-126-11	VIBRATOR, CRYSTAL (7.2MHz)				

ACCESSORY & PACKING MATERIAL

Part No.	Description
1-501-369-11	ANTENNA
1-558-543-11	CORD, CONNECTION
1-558-649-11	CORD (WITH CONNECTOR) 3P
3-786-205-11	MANUAL, INSTRUCTION (ENGLISH, FRENCH, SPANISH)
3-786-205-41	(AEP)....MANUAL, INSTRUCTION (GERMAN, DUTCH, SWEDISH, ITALIAN)
4-919-390-01	CUSHION
*4-925-155-01	INDIVIDUAL CARTON

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

9-953-336-11

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